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ABSTRACT OF THE DISCLOSURE

A hybrid telephony system with packet switching as well as circuit switching optimizes utilization of transport networks, and is accessible from any conventional telephone set. A call originating from a circuit-switched network is passed through a gateway computer to a backbone packet-switched network, and then through a second gateway computer to a second circuit-switched network where it terminates. The voice of both the originating party and the terminating party is converted to data packets by the near-end gateway computer and then converted back to voice by the far-end gateway computer. In an alternative scenario, the originating party uses a computer on the packet-switched network, which replaces the originating circuit-switched network and the originating computer. Powered by CPUs, DSPs, ASICs disks, telephony interfaces, and packet network interfaces, the gateway computers may have media conversion modules, speech processing modules and routing resolution modules, and are capable of translating telephony call signaling as well as voice between circuit-switched and packet-switched networks. Optionally, the gateway computers may also have analog trunking modules, MF and DTMF digit modules and special services modules, in order to support analog circuit-switched networks and secure telephone calls.